Infinova®

V6812IR-H0 Series

HD 1MP and 1.3MP IR IP Minidome Camera

User Manual

Read this manual carefully before installation. This manual should be saved for future use.

Important Safety Instructions and Warnings:

- Electronic devices must be kept away from water, fire or high magnetic radiation.
- Clean with a dry cloth.
- Provide adequate ventilation.
- Unplug the power supply when the device is not to be used for an extended period of time.
- Only use components and parts recommended by manufacturer.
- Position power source and related wires to assure to be kept away from ground and entrance.
- Refer to qualified personnel for all service matters.
- Save product packaging to ensure availability of proper shipping containers for future transportation.

⚡   Indicate that the un-insulated components within the product may carry a voltage harmful to humans.

⚠   Indicate operations that should be conducted in strict compliance with instructions and guidelines contained in this manual.

Warning: To avoid risk of fire and electric shock, keep the product away from rain and moisture!

CONTENTS

CHAPTER I SYSTEM INTRODUCTION

1.1 Product Description

V6812IR-H00 & V6812IR-H01 series HD 1MP and 1.3 MP IR IP minidome camera features 1/3" progressive scan CMOS sensor and built-in 3.0 megapixel fixed lens (2.8mm/4mm/6mm/8mm/12mm optional). With H.264/M-JPEG compression format utilized, this camera can output HD full-frame videos with the resolution of 960P or 720P. The built-in dot matrix IR illuminators allow a maximum of 20 meters night vision distance (the distance will be different for different lenses). It's a perfect solution for a 24x7 around-the-clock surveillance.

The camera supports the function of strengthening ROI encoding, so as to improve the image quality of key areas under low-band network environment.

The camera supports three simultaneous video streams. It also provides motion detection, privacy mask, video mask alarm, image snapshot, local recording, noise deduction, backlight compensation and WDR functions. Alarm can be associated with email sending and FTP upload.

Compact structure makes it easy to install. Also, this camera provides 3-axis adjustment, easy to adjust the monitoring angle.

V6812IR-H00 & V6812IR-H01 series is widely used in normal buildings, supermarkets, hotels, shops, parks, schools, factories, warehouses, underground parking lots and other high-resolution surveillance applications.

1.2 Product Features

- 1/3" progressive scan CMOS sensor
- Built-in dot matrix IR illuminators, at 850nm wavelength, up to 20 meters night vision distance
- The illuminator output rate can be automatically adjusted according to the lighting condition
- IR-Cut Removable (ICR) Filter for Day/Night switching
- Three Simultaneous Video Streams: Dual H.264 & Scalable M-JPEG

- With resolution up to 960P or 720P
- Smooth videos, with the frame rate up to 30fps
- Support Horizontal/Vertical mirror
- Support corridor mode
- Support WDR function
- Backlight Compensation
- Local Recording
- Up to four ROI (Region of Interest) areas
- Up to four definable motion detection areas
- Up to four definable privacy mask areas
- Support video mask alarm
- Alarms triggered by motion detection link with email sending and FTP upload
- Support simultaneous access and parameter setting via Web Server from multiple clients
- Compatible or able to integrate with Infinova V2216 and other digital video surveillance software
- Standard SDK is provided for easy integration with other systems
- Onvif Profile S
- Compact structure for surface mount, 3-axis adjustment
- Support analog video output
- 12VDC power supply
- IP55 environmental rating

1.3 System Requirement

Configuration of the computer to display image and control the camera:

CPU:	Intel Pentium 4, 2.4 GHz or above
RAM:	512 MB or greater
Network Port:	100M Ethernet port
Operating System:	Microsoft Windows 7, Microsoft Windows XP
IE Browser Version:	Microsoft Internet Explorer 6.0 or above

1.4 Product Model

This manual is for the following models:

V6812IR-H0065SA	HD Megapixel IR IP minidome camera, Day/night, 1/3 inch CMOS sensor, H.264/M-JPEG, indoor, 1.0Mpx, 12VDC, Surface mount, 4mm fixed lens
V6812IR-H0065SB	HD Megapixel IR IP minidome camera, Day/night, 1/3 inch CMOS sensor, H.264/M-JPEG, indoor, 1.0Mpx, 12VDC, Surface mount, 6mm fixed lens
V6812IR-H0065SC	HD Megapixel IR IP minidome camera, Day/night, 1/3 inch CMOS sensor, H.264/M-JPEG, indoor, 1.0Mpx, 12VDC, Surface mount, 8mm fixed lens
V6812IR-H0065SD	HD Megapixel IR IP minidome camera, Day/night, 1/3 inch CMOS sensor, H.264/M-JPEG, indoor, 1.0Mpx, 12VDC, Surface mount, 12mm fixed lens
V6812IR-H0065ST	HD Megapixel IR IP minidome camera, Day/night, 1/3 inch CMOS sensor, H.264/M-JPEG, indoor, 1.0Mpx, 12VDC, Surface mount, 2.8mm fixed lens
V6812IR-H0165SA	HD Megapixel IR IP minidome camera, Day/night, 1/3 inch CMOS sensor, H.264/M-JPEG, indoor, 1.3Mpx, 12VDC, Surface mount, 4mm fixed lens
V6812IR-H0165SB	HD Megapixel IR IP minidome camera, Day/night, 1/3 inch CMOS sensor, H.264/M-JPEG, indoor, 1.3Mpx, 12VDC, Surface mount, 6mm fixed lens
V6812IR-H0165SC	HD Megapixel IR IP minidome camera, Day/night, 1/3 inch CMOS sensor, H.264/M-JPEG, indoor, 1.3Mpx, 12VDC, Surface mount, 8mm fixed lens
V6812IR-H0165SD	HD Megapixel IR IP minidome camera, Day/night, 1/3 inch CMOS sensor, H.264/M-JPEG, indoor, 1.3Mpx, 12VDC, Surface mount, 12mm fixed lens

1.5 Specifications

Model	V6812IR-H01 Series	V6812IR-H00 Series
Image Sensor	1/3" progressive scan CMOS	
Dynamic Range	72.4dB	
S/N Ratio	50dB	
Lens	F1.6, f=4mm, 6mm, 8mm, 12mm (For V6812IR-H00&-H01 series) F1.8, f=2.8mm (For V6812IR-H00 series)	
Night Vision Distance	20m (Max)	
Camera Angle Adjustment	X (Panning): 0°~360°; Y (Tilting): -75°~75°; Z (Rotating): 0°~360°	
Day/Night Functionality	ICR	
Sensitivity	0lux (IR on)	
Exposure	Scene mode, Manual mode, Shutter priority mode	
Shutter	Auto/Manual (1/30s~1/8000s)	
White Balance	Auto/Manual/Incandescent light/Cool white fluorescent light/Sun light/Cloudy/Natrium light	
WDR	Available	
Gain Control	Auto/Manual (maximum: 64X)	
Noise Reduction	3D	
Mirror	Horizontal/Vertical	
Corridor Mode	Available	
Picture Adjustment	Brightness, sharpness, hue, contrast, saturation adjustable	
Video Compression	H.264 main profile/M-JPEG	

Maximum Resolution	1280×960@H.264/ M-JPEG	1280×720@H.264/ M-JPEG
Optional Resolution	Major stream: 1280×960, 1280×720; Minor stream: 640×480, 320×240	Major stream: 1280×720; Minor stream: 640×480, 320×240
Maximum Frame Rate	30fps@1280×960	30fps@1280×720
Data Rate	Variable bit rate; Constant bit rate: Major stream: 256Kbps~10000Kbps; Minor stream: 256Kbps~2000Kbps	
Motion Detection	Up to 4 areas	
Privacy Mask	Up to 4 masks	
ROI	Up to 4 regions	
Network Delay	≤180ms	
Local Recording	Available	
Upgrade Online	Available	
Password Protection	Available	
Network Port	One RJ45 10/100M self-adaptive Ethernet port	
Analog Video Output	Available via BNC port	
Applicable Protocols	IPv4, IPv6, TCP, UDP, IGMP, DHCP, FTP, SNMP (V3), SMTP, NTP, RTP, RTSP, RTCP, HTTP, HTTPS, TSL, SSL, 802.1X, Qos, PPPoE, DNS, DDNS, ARP, ICMP, UPnP	
Power Supply	12VDC	
Power Consumption	<5W	

Operating Temperature	14°F~122°F (-10°C~+50°C)
Storage Temperature	-4° F ~ 140° F (-20° C ~ 60° C)
Operating Humidity	0%-90% RH (non-condensing)
Dimensions (H×Ø)	3.34"×Φ4.71" (84.7mm×Φ119.5mm)
Box Dimensions (L×W×H)	6.65 "×6.65 "×5.79" (169mm×169mm×147mm)
Unit Weight	1.43lbs. (0.65kg)
Shipping Weight	1.83lbs. (0.83kg)

1.6 Precautions

1. Do not drop the camera or subject it to strong knock.
2. Do not point the camera lens toward the sun or other strong light.
3. Do not install the camera in environment with temperature beyond the acceptable range (from -10°C to 50°C).
4. Never let liquid of any kind flow into this unit.
5. Do not directly touch the CMOS element. If it is necessary to clean the element, use a soft cloth moistened with alcohol to wipe off the dust.
6. If any abnormality occurs, make sure to unplug the unit and contact your local dealer.
7. This camera features AGC circuit, so when the camera is applied under low illumination, sensitivity will enhance automatically, making images look rough, which is normal.
8. The camera power supply is 12VDC. Be sure of the +/- terminal correct.
9. Firstly perform network settings after login. Gateway IP address should be set to the IP address of the gateway that the device connects to.
10. The IP address is not allowed to conflict with that of other devices; otherwise, you cannot visit the camera.

CHAPTER II INSTALLATION

Step 1: Prepare mounting holes

Attach the enclosed mounting schematic label on the desired position of wall or ceiling; drill holes according to the label's instruction (4 mounting holes and 1 cable hole).
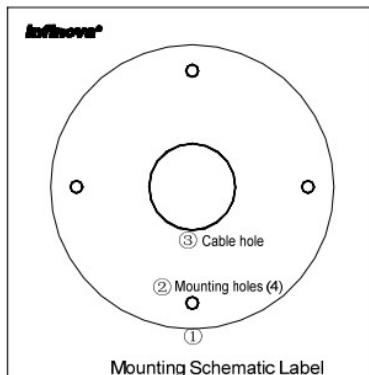

Figure 2-1

Step 2: Install camera base

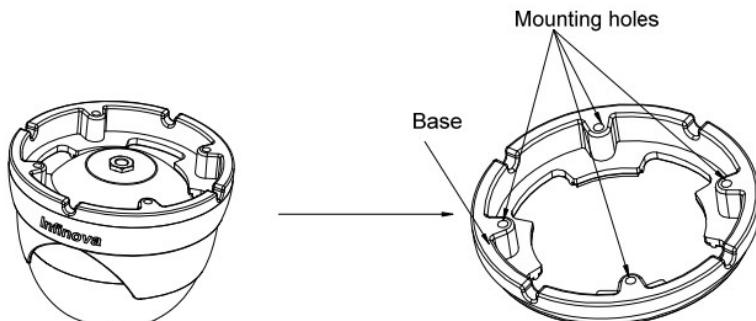Unscrew the base and take it off. Install the base to the ceiling via the 4 mounting holes.

Figure 2-2

Step 3: Pre-fasten minidome camera

Install tightening ring, chuck ring and dome module to the base. Keep tightening ring loose, so that the dome module can turn freely.
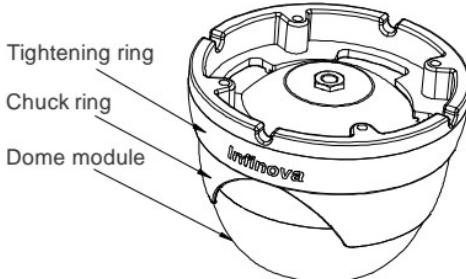

Tightening ring

Chuck ring

Dome module

Figure 2-3

Step 4: Adjust dome module

1. Turn the dome module to make it point to surveillance area. The camera features X, Y, Z 3-axis adjustment. It allows 0°~360° panning adjustment, -75°~75° tilting adjustment and 0°~360° rotating adjustment.
2. Adjust the lens according to the schematic label; make sure photosensitive resistance lies at the bottom; then fasten tightening ring.
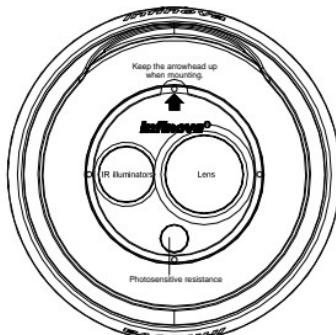

Keep the arrowhead up
when mounting.

IR illuminator   Lens

Photosensitive resistance

Figure 2-4

Dimensions (Unit: inch, in the parentheses is mm)

3.34(84.7)

Ø4.71(119.5)
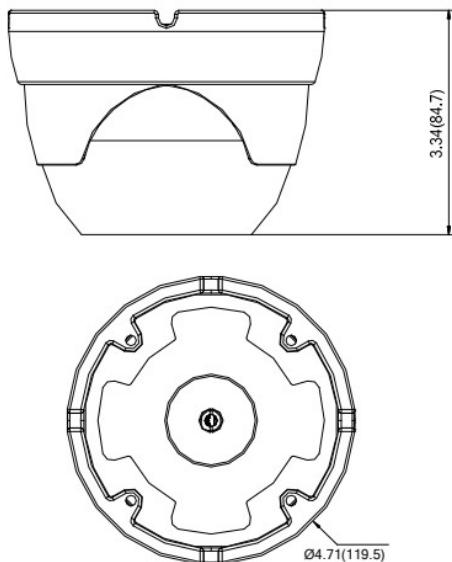
Figure 2-5

CHAPTER III IE BROWSER SETTINGS

When view the video, the user need to adjust the IE browser of the monitor or other video devices, and set proper system function based on the following instructions:

● Support IE browser version: Internet Explorer 6.0 or above;
● Must install InfiPlayerAX control and equip with Directx 9.0c.

3.1 Equipment Connection

V6812IR-H0 series IP camera can be directly connected to a computer, or connected to a network.

Note: Check whether the connection is tight or not before power-on.

3.2 Software Installation

The installation procedures of V6812IR-H0 series camera image software are listed as follows:

(1) Login

First, start IE browser and enter IP address. Enter user name and password in the pop-up login interface.

The default IP address is http://192.168.1.100; the default subnet mask is 255.255.255.0 and the default gateway IP address is 192.168.1.254. For normal access, correctly set local IP parameters before system login.

Do log in the system with the default super user for the first time to run the software. The default Super User is admin (password: admin).

Note: Do change the password in time to secure your system.

(2) Install control

There are two ways to install control.

Method 1:

The prompt message as below will come out in live view window after a

successful login. Click the link to run, or store the exe file, then run it.

Figure 3-1

If the installation fails, check whether there is video viewed through other IE
window or page. You should close the video or the IE window directly.
If it successes, click refresh, you can view the live video.

Method 2:
The prompt message as below will come out in the page after a successful
login. Right click "Add-on Disabled" and select "Run Add-on".

Figure 3-2

Then the prompt of security warning will pop up to remind the user to install
InfiPlayerAX control. Click "Install".

Figure 3-3

After InfiPlayerAX control is installed, you can view the live video. If it pops
up reboot prompt, please cancel reboot. Then close all the IE window and
install InfiPlayerAX control once again. The live video will display as below:

Figure 3-4

⚠️ **Note:**

If InfiPlayerAX control installation falls, the live video won't display. Then, you should change the IE security level.

1. Select "Tool" in the menu bar, and then select "Internet Options" from the drop-down menu.
2. Select "Security" in the pop-up Internet options.
3. Click "Internet" icon and then click "Custom Level".
4. Select "Enable" or "Prompt" in the options of "Download unsigned ActiveX controls".
5. Click Privacy in the "Internet", clear "Block pop-ups", then redraw the screen and install control as per the prompt. The live video will display.

By now, the IE browser setting for image view comes to an end.

CHAPTER IV BASIC FUNCTION OPERATION

This chapter mainly introduces the settings and operation of V6812IR-H0 series.

4.1 Live View

Start IE browser after the server is powered on for about 90 seconds, and then enter IP address, such as http://192.168.1.100 (default), in the address field.

Note: The default subnet mask is 255.255.255.0 and the default gateway IP address is 192.168.1.254. For normal access, please correctly set local IP parameters before system login.

The login interface is displayed as shown in figure below in English operating system.

Figure 4-1 User Login

Do log in the system with the default super user for the first time to run the software. The default Super User is admin (password: admin). Input the correct user name and password and then click "OK" button to log.

Note: Please change the password of supper users to ensure system security, refer to Section 4.7 for details.

After login is successful, the following interface will display:

Figure 4-2 H.264 Live view

V6812IR-H0 series IP camera supports H.264 and M-JPEG video compression formats. After successful login, it enters H.264 major stream live video interface.

Stream Type: Users can also select H.264 minor stream or MJPEG from the dropdown list of stream type. In the H.264 major or minor stream type, users can do recording, snap shooting, and set motion detection and privacy mask switches.

Video Size: Over browsing videos, users can also select a proper video scale.

Play mode: live or fluid for option.

Corridor mode: when the mode is enabled, the horizontal angle narrows down, while the vertical angle stretches, shown as the figure 4-3.
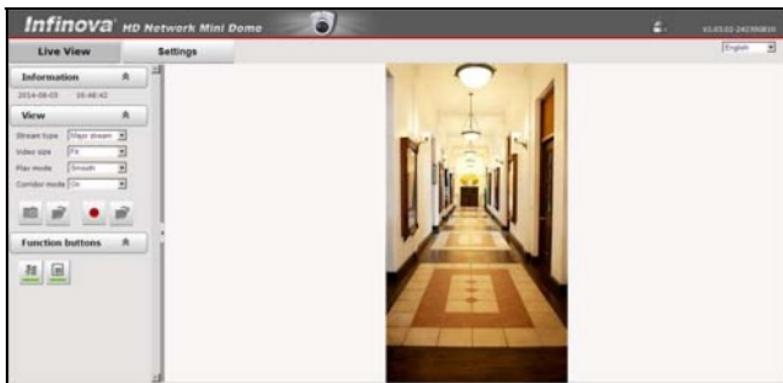
Figure 4-3

Click the button 📷 to snapshoot and 📁 to enter the storage path. Default: C:\InfiPlayerAX\Picture.

V6812IR-H0 series supports local recording. Click the recording button ● to start recording; when the button changes to ■, click it to stop recording. During local recording, "REC" appears on the video screen. Click the button 📁 to enter the recording storage path. Default: C:\InfiPlayerAX\ Video.

Users can set the snap shooting and recording storage path in the video settings interface.

📑 📑 Indicate that the motion detection and privacy mask functions are disabled. Click the buttons to enable them and then the buttons will be shown as 📑 📑.

Note: only when motion detection or privacy mask is enabled, you can set the corresponding function in Video Settings, refer to Section 4.5.3 or 4.5.4 for details.

Note: the login web page language should be set to the same as that of PC's operating system.

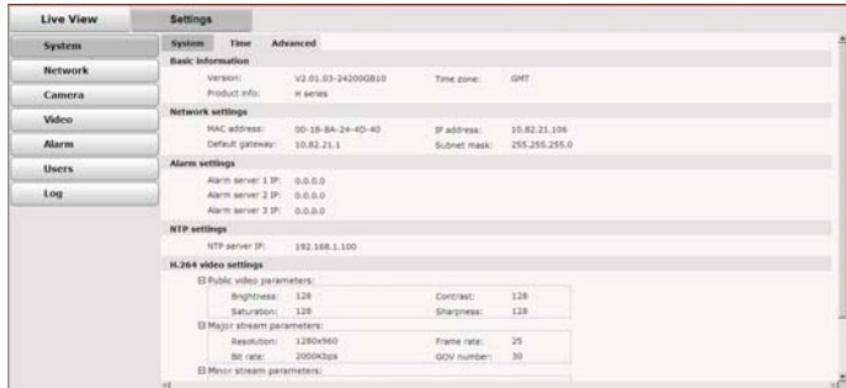Click the option tab "Setting" to enter the system setting interface.

Figure 4-4 Settings Interface

With the help of navigation menu on the left, Super user can perform the following operations: Basic Information View, Time Settings and Advanced Settings, Network Settings, Camera Settings (including Basic Set, Exposure Set, Effect Set, White Balance, IR set, Reset), Video Settings, Alarm Settings, Account Settings (Add/Delete User, Change Password), Log, etc.

⚠ **Note: The following instructions are used for the super user.**

4.2 System

Click the navigation bar "System" and it displays the following three option tabs: System, Time and Advanced, as shown in Figure 4-3.

4.2.1 System Information

The initial interface of System Settings displays related system information, such as basic system information, network settings, NTP settings, alarm settings, H.264/MJPEG video settings, etc.
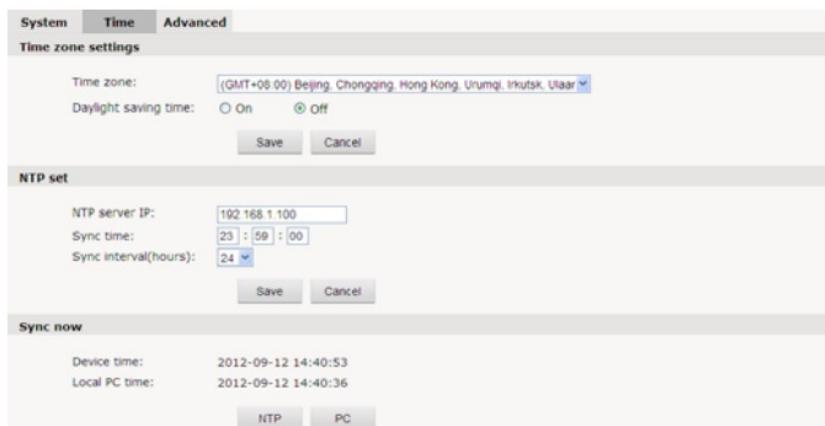
4.2.2 Time Settings

Figure 4-5 "Time" Settings

Time Zone Settings

Time Zone: Select the desired time zone in the scroll box, and then click "Save" to save it.

There are 33 time zones for your selection.

If Daylight Saving Time is applied in your region, please enable daylight saving time.

After settings completed, please click the button "Save".

NTP Settings

Set the NTP server's IP address, synchronization interval, etc.

After completed, please click the button "Save".

Sync now

There are two sync modes: local sync and NTP sync.

Local Sync means the system time is consistent with that of local PC. In the

NTP Sync mode, the system will automatically adjust time to the same as that of NTP Server.

4.2.3 Advanced Settings

Figure 4-6 "Advanced" Settings

Software Update

Free software update is provided for V6812IR-H0 series camera, and this update service can reduce system maintenance budget.

Confirm the requirement submitted by user, we will provide the latest software for download, and help user to update the V6812IR-H0 series camera.

Follow the steps below to update software:

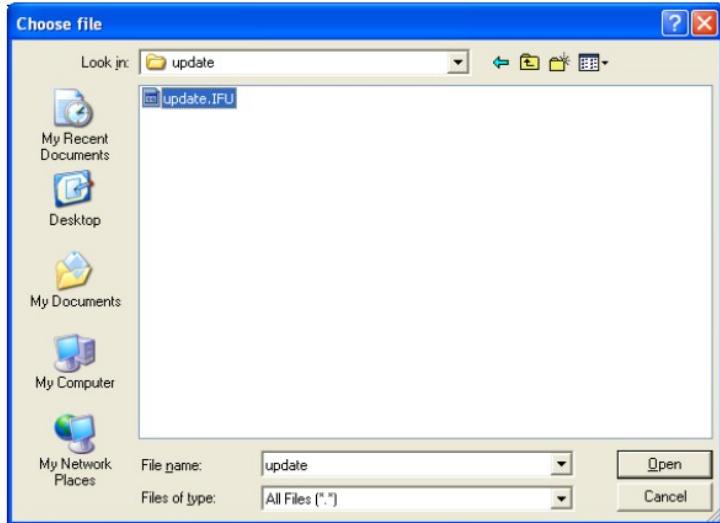Click "Browse" button on the interface and the file selection dialog box will pop up.

Figure 4-7

Select update file, and press "Open" button. The selected update file will be displayed in the box before "Browse".

After that, click "Submit" button to update software, the following information will appear:
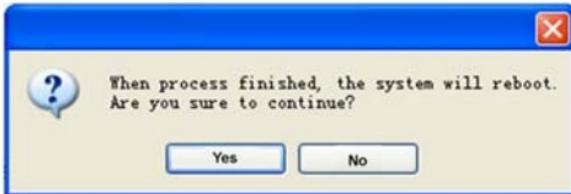

Figure 4-8

Click "Yes" button, run the program to finish the update.

The response time is due to the program type. You may wait a long time for some program. Do not power off during the update process. Power-off will make update fail, even damage the original program or unable to update again.

After update successfully, it needs to reboot the system. There is time prompt in the web page during reboot. After reboot, it will skip to new web page to run new program.

Note: Available only for the super user.

Factory Settings

V6812IR-H0 series camera provides online reset function, which greatly facilitates reset adjustment.

Select "Keep current IP unchanged", click "Reset" button and the system will pop up a message as below:
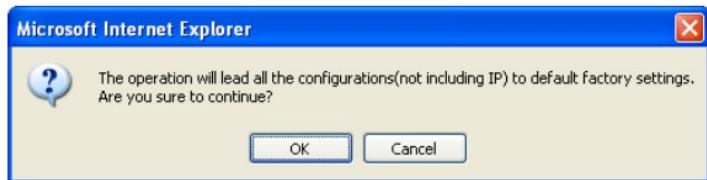

Figure 4-9

Click "OK", all the parameters (excluding IP address) will be reset to the factory default settings.

If "Keep current IP unchanged" is unselected, the IP address will be reset to the factory default settings.

There is time prompt in the web page during reset. After reset, it will skip to new web page.

If current IP unchanged, you can access web page directly. If IP address resets to 192.168.1.100, you can't access web page. Then, you have to set PC's IP address to 192.168.1 section, such as 192.168.1.25. After that, access web page to change camera's IP address and save, PC's IP address will restore to the corresponding section.

Note:

1. To avoid error happens, the operation of online reset function should be performed under qualified personnel's guide.

2. Default IP address is 192.168.1.100, and default subnet mask is 255.255.255.0.

3. Do not power off during reset, or else the reset will fail.

Online Reboot

Click "Reboot" button, the dialog box "This operation will take 90 seconds, are you sure to continue？" pop up. Click "OK" and the system will restart. There is time prompt in the web page during reboot. After reboot, it will skip to new web page.

Note: Available only for the super user.

4.3 Network Settings

Click "Network" in the navigation bar, and the following interface will display:

Figure 4-10 Network Settings

10 option tabs are available: Network, FTP, SMTP, HTTPS, 802.1X, QOS, IGMP, SIP, DDNS and UPnP.

4.3.1 Network Settings

IP mode: support both IPv4 and IPv6 modes. Network parameters are slightly different under different IP modes.

Figure 4-11 Network Settings

Under IPv4 mode, users can enable or disable DHCP. When it is disabled, users can set Unit IP address, Subnet mask, Gateway and DNS server IP address manually.

Note: The system indicator quickly flickers for 5s after the network settings completed.

Users can also enable/disable PPPoE in this interface. If enabled, users can set the user name and password.

V6812IR-H0 series camera supports heartbeat function. In SNMP settings, set and save the heartbeat sever IP address and Heartbeat interval, and then the heartbeat package will be sent to the server or client, which greatly facilitates the server or client to know about the camera's network status.

4.3.2 FTP Settings

Figure 4-12 FTP Settings

V6812IR-H0 series camera has the function of alarm associated with FTP upload (alarm triggered image snapshot). Configure server IP, user name and password in the FTP settings and activate FTP handling way in alarm settings, then alarm triggered images FTP upload can be achieved.

4.3.3 SMTP Settings

Figure 4-13 SMTP Settings

User needs to set mail server, recipient, etc in SMTP settings interface.

- **Server IP**: Set mail server address.
- **From:** Set sender's mail address.
- **To:** Mail address of recipient.
- **CC:** Mail address of the person copy to.

- **Authentication**: Enable or disable authentication function. This function should be set according to authentication requirements of mail server.
- **User name**: Sender's name, it can be set according user's needs.
- **Password**: Set sender's password.

Note: there is no limit for Sender's name and password settings.

After setting, click "Set" Save to take effect.

If user selects "mail" in "Alarm Settings" interface, system will send mails according to SMTP settings.

4.3.4 HTTPS Settings

Network	FTP	SMTP	HTTPS	802.1X	QOS	IGMP
CA certificate import						

CA certificate: [_____] [Browse...] Submit

Figure 4-14 HTTPS Settings

V6812IR-H0 series camera supports HTTPS protocol. You can import the CA certificate in the interface.

4.3.5 802.1X Settings

Network	FTP	SMTP	HTTPS	802.1X	QOS	IGMP
802.1X						

Authentication: ⊙ On   ○ Off
EAP method: [MD5 ▼]
User name: [_____]
Password: [_____]

[Save] [Cancel]

Figure 4-15 802.1X Settings

V6812IR-H0 series camera supports 802.1X protocol. You have to enable 802.1X authentication when needed. Then, select an EAP method and enter the user name and password.
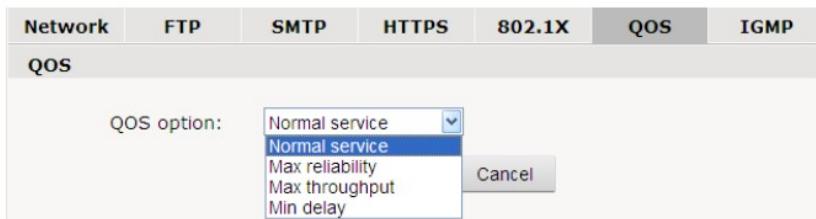
4.3.6 QOS Settings

Figure 4-16 QOS Settings

There are 4 network Qos modes to be selected:

(1) Normal Service

(2) Max Reliability

(3) Max Throughput

(4) Min Delay

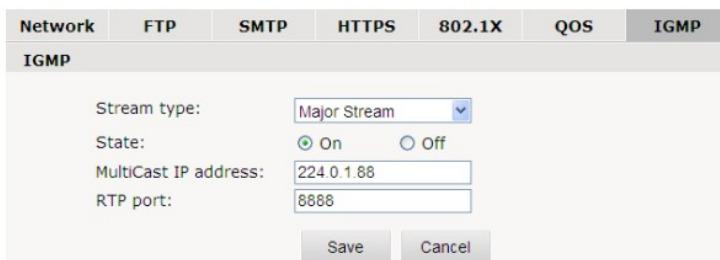Recommend: Normal Service.

4.3.7 IGMP Settings

Figure 4-17 IGMP Settings

V6812IR-H0 series camera supports multicast function. In the IGMP interface,

users can select the stream type and set the state, multicast IP address and RTP port.

4.3.8 SIP Settings

Figure 4-18 SIP Settings

SIP Server: to configure SIP server for device;

SIP Server IP: the IP address of SIP server;

Port: the port number of SIP server;

Server ID: the ID of SIP server;

Device ID: the device ID used for registration with SIP server;

Alarm ID: the ID registered for device alarm;

Register Interval: the interval for re-registration of device in seconds;

Heat Beat Interval: the interval to send heat beat information by the device in seconds;

After configuration completed, click Save and the device sends a registration request to the server.

Position Information: the mounting information or instruction for device.
Longitude: the longitude of mounting position, as precise to two places of decimal;
Latitude: the latitude of mounting position, as precise to two places of decimal.

4.3.9 DDNS Settings
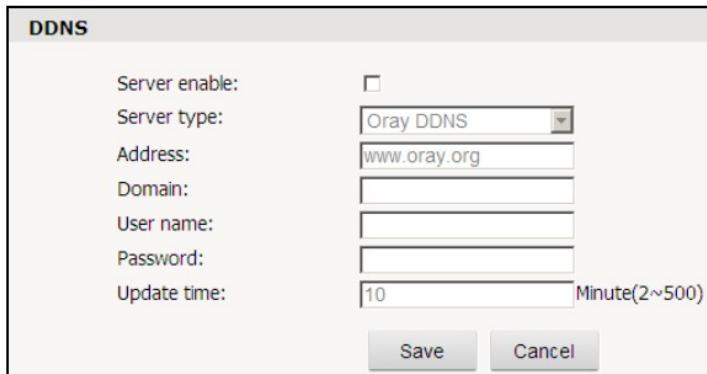
Figure 4-19 DDNS Settings

Dynamic Domain Name System (DDNS) synchronizes the host name and dynamic IP address continuously. Users don't have to memorize the dynamic IP address, but enter the dynamic domain name to connect the IP camera.

DDNS needs a PC with fixed IP address on the Internet to run the dynamic domain name server.

Operation: select DDNS type in Enable option, enter the IP address of the DDNS server into the address bar, configure domain name, user name, and password and update time and then save the settings. Open the IE browser, and enter the domain name to go to the query page of the device.

4.3.10 UPnP Settings

Create mapping between private network and the Internet via UPNP protocol. Select UpnP option and enter the configuration page. The added mapping list appears on the page.

	Enable	Service	Protocol	Internal port	External port	Operate
	☐	WebService	TCP	80	80	
	☐	PrivService	TCP	90	90	
	☐	RTSPService	TCP	554	554	

Figure 4-20 UPnP Settings

In "Operation" column, ✖ means to delete; ✎ means to edit user information.

Click Add button to add the mapping.

Service name:	
Protocol:	TCP ▼
Internal port:	
External port:	

Save   Cancel

Figure 4-21

4.4 Camera Settings

Click "Camera" in the navigation bar to enter the interface shown as below:

Figure 4-22 Basic Settings
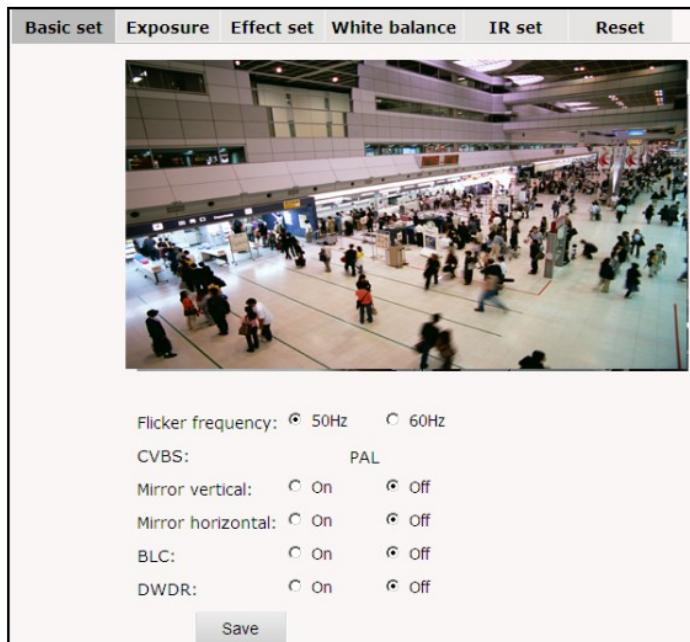
4.4.1 Basic Settings

You can set the following parameters:

Flicker frequency: 50Hz or 60Hz.

CVBS: it automatically changes with the flicker frequency.

Notes: The analog video is closed when the MJPEG video stream is enabled.

To enable the analog video, please close the MJPEG video stream.

Enable or disable horizontal and vertical mirror, backlight compensation or WDR.

4.4.2 Exposure Settings

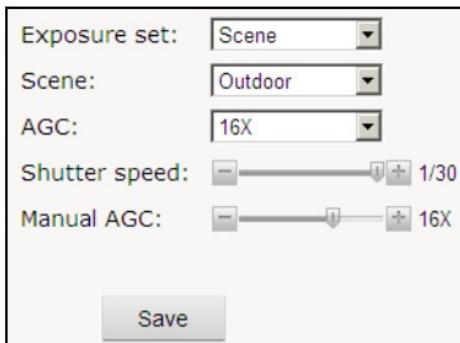|	
Exposure set:	Scene
Scene:	Outdoor
AGC:	16X
Shutter speed:	1/30
Manual AGC:	16X

Save

Figure 4-23 Exposure Settings

Exposure set, scene, AGC, shutter speed and manual AGC can also be set in this interface.

Exposure Set: Manual, Scene and Shutter priority. In the Scene mode, indoor or outdoor can be selected and AGC can be set (8X, 16X, 32X, 48X, 64X optional); if set to manual mode, shutter speed can be set from 1/30s to 1/8000s and manual AGC can be set to 1X to 64X, yet the scene and AGC are nonadjustable; if set to shutter priority mode, the shutter speed and AGC can be set.

4.4.3 Effect Settings

In the Effect Settings interface, users can adjust the brightness, sharpness, hue, contrast; saturation and 3D denoise in two ways: General or Mode, as shown in the figure below:

Figure 4-24 Effect Set - General

Drag the slider to adjust the brightness, sharpness, hue, contrast, saturation and 3D denoise.

Figure 4-25 Effect Set - Mode

The camera supports 6 video effect modes. Users can set name for each mode. Each mode matches with a group of parameters, such as IR mode, brightness, sharpness, hue, contrast, saturation and 3D denoise. Users can set and save effect parameters for each mode. Click "Factoryset" to restore it to default settings.

In the Mode call, users can set effect mode call status and call period.

4.4.4 White Balance Settings

Figure 4-26 White Balance Settings

The camera has rich white balance modes, including Auto, Manual, Incandescent light, Cool white fluorescent light, Sun light, Cloudy and Natrium light. If set to manual mode, you can set the red gain and blue gain.

4.4.5 IR Settings

Basic set	Effect set	White balance	IR set	Reset

IR mode: Auto ▾

Switch time: 5s ▾

Power set: Auto ▾

Power set: ▭▯━━━━━━━━━ ＋ 1

Save

Figure 4-27

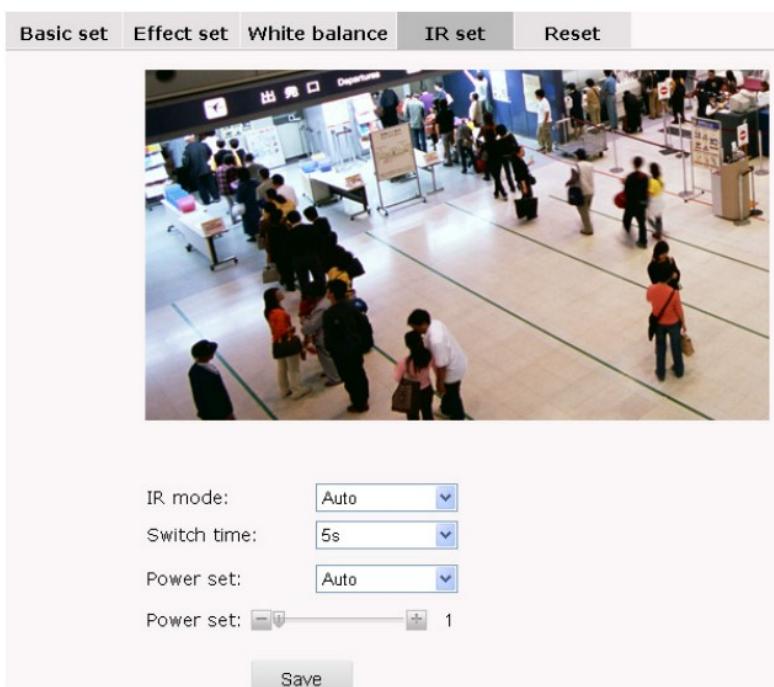**IR mode:** set IR illuminators working mode.

Options: Day, Night, Auto (turn on or off as per ambient light).

Switch time: in auto mode, the response time for day/night switch.

Power set: the adjusting mode of illuminators' power consumption.

Options: Auto, Manual. In auto mode, adjust illuminators' brightness as per ambient light. In manual mode, adjust the brightness by moving the slider in the page.

4.4.6 Reset

In the interface, you can restore all the Camera Settings parameters to the factory default settings.

4.5 Video Settings

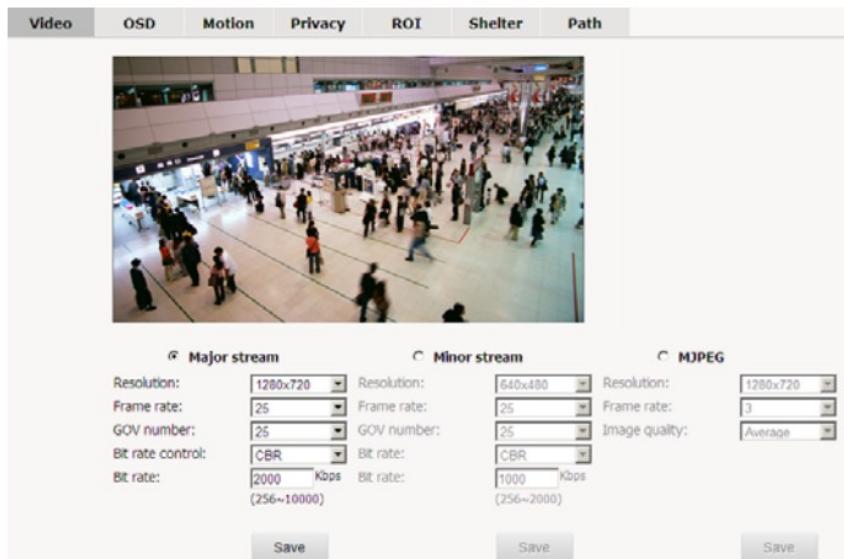Click the button "Video" in the navigation bar to display the following interface.

Figure 4-28 Video Settings

Video, OSD, Motion, Privacy, ROI, Shelter and Path can be set in this interface. Click the related option tab to enter the setting interface.

4.5.1 Video

Users can set the video parameters in the format of H.264 major or minor stream and MJPEG stream, such as resolution, frame rate and IP rate.

Resolution:

For H.264 major stream, the resolution of V6812IR-H01 series comes to 1280×960 and 1280×720; while the resolution of V6812IR-H00 series comes to 1280×720.

For H.264 minor stream, the resolution comes to 640×480, 320×240 and closed.

For MJPEG stream, the resolution of V6812IR-H01 series comes to 1280×960, 1280×720, and closed; while the resolution of V6812IR-H00 series comes to 1280×720 and closed

Frame Rate: the number of compressed frames produced by camera per second.

The bigger the frame is, the better the image continuity will be, but the CPU performance is lowered.

The smaller the frame is, the worse the image continuity will be, but the CPU could handle more events.

The maximum frame rate for H.264 is 30fps. The maximum frame rate for MJPEG is 5fps.

GOV number: GOV number means the ratio of I frame to P frame in compressed video images.

The bigger the value is, the less the data quantity is and the less network resource occupancy.

Max. GOV number can be set to 60.

Bit Rate Control: There are 2 modes: variable rate (vbr) and constant rate (cbr).

The variable rate can adjust the bandwidth that it occupies automatically according to the complexity of image, because the complexity of real video sequence keeps changing, details, speed, etc, and the variable rate setting mode can be used to choose how much bandwidth should be used. If the video gets more details and moving fast, then it takes up more bandwidth to transmit, and

reversely it occupies less bandwidth. When the setting goes with constant bit rate, then the image is transmitted under a constant bandwidth.

Bit Rate: You have to set the upper limit of bit rate if "vbr" is selected; the stream size will be fixed if "cbr" is selected and the stream size is defined in the "Bit Rate". For major stream, the bit rate can be 256~10000kbps; for minor stream, the bit rate can be 256~ 2000Kbps.

Image Quality: it can be set under MJPEG stream. Options: Highest, High, Average, Low and Lowest. The higher the image quality is, the more bandwidth it will occupy.

4.5.2 OSD

Figure 4-29

OSD settings include: Text OSD, Image OSD and Date OSD.

Click the button "On" for text OSD; you can set the text content and the display position of text.

Context: Enter the text content in the box of Context, which allows up to 42 characters (characters/lower/upper case letters and 0~9).

X-axis &Y-axis: The title axis location. Both X-axis and Y-axis can be any of whole numbers from 0 to 99.

Image OSD: Click the button "On" for Image OSD, you can upload the image, set its transparency, delete its white ground and set the display position of the image.

The camera supports only one image uploaded on the video screen. Click the "Browse" button after the "Image", select the image and click "Upload".

X-axis &Y-axis: The title axis location. Both X-axis and Y-axis can be any of whole numbers from 0 to 99.

Drag the slider "Transparency" to adjust the transparency of the image.

Tick "Off White Ground" to delete the white ground.

Note:

1.   The image format is bmp.
2.   The max dimension is 352x288, with the width and the height even number, such as 160x130.

Date OSD: Select the radio button "On" to set the display position of the date.

Font Size: Set the size of the displayed characters. The bigger the value is, the larger the size is.

After all settings finished, click "Save" button to display OSD on the video. To cancel OSD, set it to "Off" and then click the button "Save".

4.5.3 Motion Detection
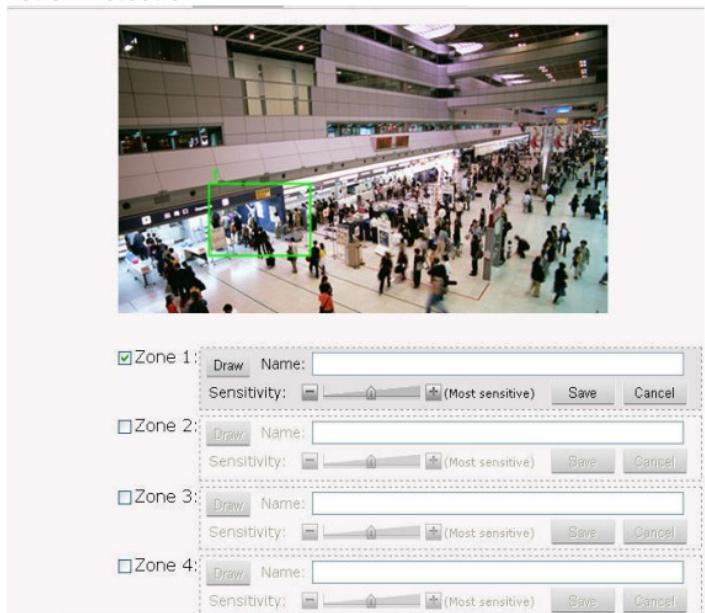
Figure 4-30 Motion Detection Settings

V6812IR-H0 series camera support motion detection. Users can easily set the motion detection areas (up to 4) with the mouse.

Note: do turn on motion detection function in Live View interface before motion detection setting.

Tick the box of Zone number to be set. If the motion detection area has been set, a blue frame will be displayed on the screen.

How to set the motion detection area:

Tick the box of motion detection area number. Click the button "Draw" with the mouse, and press the left mouse button and drag on the video till a blue frame displays on the screen. Then, click the button "Save" with the left mouse button and the blue frame changes into green which indicates successful setting.

Besides, you can set the area name and sensitivity.

To cancel a motion detection area, just cancel the box ticking.

4.5.4 Privacy Mask

V6812IR-H0 series camera supports privacy mask function. If there is certain location within the surveillance area where operators are not allowed to see, and thus, Privacy Mask can be applied. System covers and shields the sensitive area via Privacy Mask setting, to avoid operators observing certain sensitive locations on monitor.

Note: do turn on privacy mask function in Live View interface before privacy mask setting.
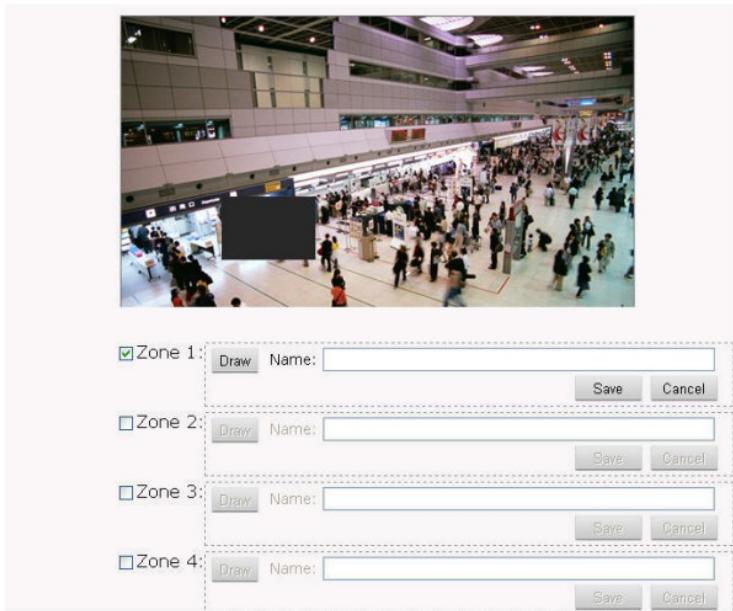
Figure 4-31 Privacy Mask Settings

How to set and cancel privacy mask is similar to the operations of motion detection, refer to Section 4.5.3.

4.5.5 ROI

The camera supports four ROI encoding areas.
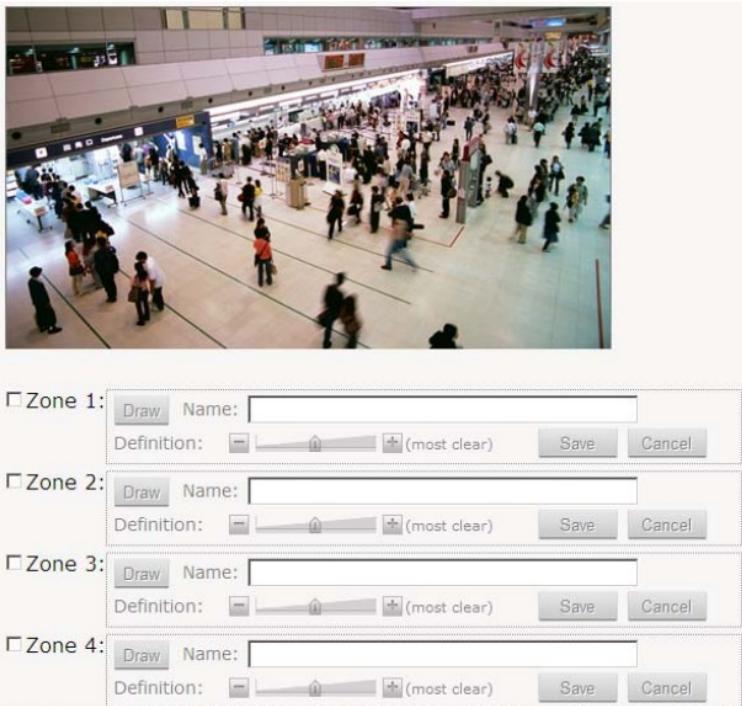
Figure 4-32 ROI Settings

ROI settings method:

Tick off the serial number of the region for setting and click the button "Drag Box". Then press the left button of the mouse on the video picture and drag it until a blue-line box appears. Click the button "save" with the left button and when the color of the regional border turns from blue into green, ROI settings complete successfully

Cancel the tick-off of the serial number of the region, and then ROI settings are

cancelled.

Figure 4-33 Region 1 settings

4.5.6 Active video tampering

The camera supports active video tampering.

Figure 4-34 Active video tampering settings

You can open or close this function on this page. When the function is open and active video tampering is detected, the alarm lamp on the top of the page turns red.

4.5.7 Storage Path

You can set the photo saving path and recording saving path in the following interface.

Figure 4-35 Storage Path

Default photo saving path: C:\InfiPlayerAX\Picture.

Default video saving path: C:\InfiPlayerAX\ Video.

Photo and video formats can also be set. The default photo format is .jpg and the default video format is .avi.

To change the saving path, click the button "Browse" and select the path from the popup dialog box.

4.6 Alarm Settings

Click "Alarm" in the navigation bar to display the following Alarm Settings interface:

Alarm configuration

Alarm server 1 IP:	0.0.0.0
Alarm server 2 IP:	0.0.0.0
Alarm server 3 IP:	0.0.0.0

Save

Alarm out contact

	Mail	FTP	Select all
Motion area 1	☐	☑	☐
Motion area 2	☐	☐	☐
Motion area 3	☐	☐	☐
Motion area 4	☐	☐	☐

Save

Alarm schedule

	Start time	End time
☐ Sun.	00 : 00	00 : 00
☐ Mon.	00 : 00	00 : 00
☐ Tue.	00 : 00	00 : 00
☐ Wed.	00 : 00	00 : 00
☐ Thu.	00 : 00	00 : 00
☐ Fri.	00 : 00	00 : 00
☐ Sat.	00 : 00	00 : 00
☑ Everyday	00 : 00	24 : 00

Save

Figure 4-36 Alarm Settings

Alarm configuration

Alarm Server IP: used to set the IP address of alarm server. If alarm occurs, it will inform the alarm server.

Alarm out contact

Users can set the relevant alarm response way for motion detection alarm. Options: Mail, FTP. After setting completed, click "Save" button to take effect. Note: when "FTP" or "Mail" is selected, you need to set FTP or SMTP parameters in Network Settings, refer to Section 4.3.2 or Section 4.3.3 for details.

Alarm schedule

V6812IR-H0 series camera can set the effective alarm schedule. Select the alarm period (if Sunday is selected, alarm will be enabled during the set period of each Sunday; if "Everyday" is selected, alarm will be enabled during the set period of everyday), and then, set the time period. Enter the start time and end time in the 24-hour format. The end time must be larger than the start time.

4.7 Account Settings

The default super user is admin (password: admin). Super user can add, delete common user, and change the password of common users. Super user can change his password. Do change Super user's password in time to secure your system.

A maximum of 7 common users are supported.

Detailed instruction about how to add and delete user are addressed below.

Click the Account option tab in the Settings interface, the following account information will display. The "Num" item shows the current user number. In "Property" column, 😊 stands for super user; 😑 stands for common user. In "Operation" column, ✖ means to delete; ✎ means to edit user information. See figure below:

Num	User name	Property	Operation
1	admin		

Figure 4-37 Account Settings

1. Add Users

(1) Click " Add User ", enter the interface of "Add a User".

Add a User

User Name:

Password:

Password confirm:

OK   Cancel

Figure 4-38 Add a User

(2) Enter the desired User Name and Password (Note: User name and password shall include letter, number and underline only. No special character is allowed. The string length of user name is legal between 1 and 30 characters and that of password is between 5 and 20 characters.)

(3) Click "OK" button. If the setting is successful, the new user name will appear in the account list. Take new user "user1" as an example:

Num	User name	Property	Operation
1	admin		
2	user1		

Figure 4-39

2. Delete Users

In the "Account setting" interface, click button of the "Operation" item to delete user. The following dialog box will display:

Figure 4-40

Click "OK" button, the selected user would be deleted and the account list would be automatically updated.

3. User Password Change

Click button in the account list, the dialog box of Edit User Information will pop up:
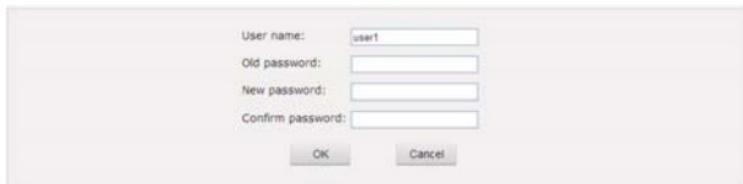

Figure 4-41

Input the old password, enter the desired new password for twice and then click "OK" button, the following picture will appear:

Figure 4-42

Note: The login interface will pop up if change Super user password changed. Input Super user name and password in the interface to log, then the prompt will inform password has been edited successfully.

4.8 System Log

Click the "Log" option tab, the date, time and log information will appear on the right of the screen.

Date	Time	Log
2012 - 09 - 12	14 : 23 : 35	app: change IP to 192.168.160.233
2012 - 09 - 10	11 : 21 : 00	app: system start!!
2012 - 09 - 06	20 : 20 : 00	app: system start!!
2012 - 09 - 06	12 : 17 : 48	app: system start!!
1970 - 01 - 01	00 : 01 : 55	app: change Gateway to 192.168.160.254
1970 - 01 - 01	00 : 01 : 55	app: change netmask to 255.255.248.0
1970 - 01 - 01	00 : 01 : 55	app: change IP to 192.168.162.151
1970 - 01 - 01	00 : 00 : 19	app: system start!!
1970 - 01 - 01	00 : 00 : 19	app: image_server or encode_server isn't started !

Page 1 of 1   Goto 1 ▾ Delete logs

Figure 4-43

It can display 30 logs on a page. The user can turn over the pages or skip to the desired page by clicking the below arrows. Click "Delete logs", a prompt will come out. Then, click "Yes" to clear logs.

APPENDIX I MAGNETIC RING FILTER INSTRUCTION

To reduce electromagnetic interference that power supply generates, it is necessary to install a magnetic ring filter with the power cable of Infinova front-end IP device.

To install a magnetic ring filter with power supply:
Step 1: Open the magnetic ring filter and lead the power cable through.

Step 2: Wire the power cable on the magnetic ring filter 3 rounds or more (Make sure the filter can be well closed).

Step 3: Close the magnetic ring filter.

Notice: The magnetic ring filter should be installed no more than 50 mm away from the power output connector. As shown in Figure 3, the cable length from A to B should be 50mm at most.

Figure 1 Closed magnetic ring filter   Figure 2 Open magnetic ring filter

B A

Figure 3 Power cable with magnetic ring filter
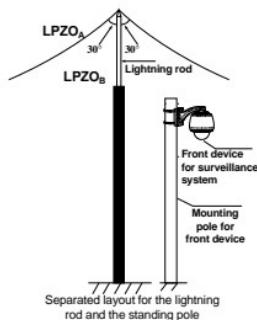
APPENDIX II QUESTIONS & SOLUTIONS

The following table describes the symptoms causes and solutions for the problems.

Symptoms	Possible Causes	Solutions
The network camera does not perform initiation after power-on	Wrong power connection	Reconnect power cable
	Power supply failure	Repair or replace power supply
	PCB fuse damage	Replace the fuse
	Immediate startup after power-off	Restart 10 seconds later after power-off
	If PoE power supply is used, too long transmission distance may make the power of the Power Supply Switcher insufficient.	Shorten the length of the power supply network cable, or replace Power Supply Switcher of larger power
	If PoE power supply is used, connection to other electric appliance makes the ground level not in the correct level.	Disconnect other electrical appliance.
No video signal displayed	The plug-in for viewing image is installed incorrectly.	Refer to the Plug-in Installation to reinstall it.
	Network camera's IP address conflicts with other user's IP address	Set the unique IP address
Vague image	Manual focus is not precise	Manually adjust the camera focus carefully.

APPENDIX III LIGHTNING & SURGE PROTECTION

The product adopts multi-level anti-lightning and anti-surge technology integrated with gas discharge tube, power resistor and TVS tube. The powerful lightning and surge protection barrier effectively avoids product damage caused by various pulse signals with power below 4kV, including instantaneous lightning, surge and static. However, for complicated outdoor environment, refer to instruction below for lightning and surge protection:

- The product features with dedicated earth wire, which must be firmly grounded. As for surveillance sites beyond the effective protection scope, it's necessary to erect independent lightening rods to protect the security devices. It's recommended to separate the lightning rod from the mounting pole, placing the rod on an independent pole, as shown in the figure below. If the product has to be installed on the same pole or pedestal for lightning rod, there should be strict insulation between the video cable BNC terminal, power cable, control cable and the standing pole of the lightning rod.

- For suburb and rural areas, it's recommended to adopt direct burial for the transmission cables. Overhead wiring is prohibited, because it's more likely to encounter lightning strike. Use shielded cables or thread the cables through metal tubes for burial, thus to ensure the electric connection to the metal tube. In case it's difficult to thread the cable through the tube all the way, it's acceptable to use tube-threaded cables only at both ends of the transmission line, yet the length in burial should be no less than 15 meters. The cable sheath and the tube should be connected to the lightning -proof grounding device.

- Additional high-power lightning-proof equipment and lightning rods should be installed for strong thunderstorm or high induced voltage areas (such as high-voltage substation).

- The lightning protection and grounding for outdoor devices and wires should be designed in line with the actual protection requirement, national standards and industrial standards.

- The system should perform equipotential grounding by streaming, shielding, clamping and earthing. The grounding device must meet anti-interference and electric safety requirements. There should be no short-circuiting or hybrid junction between the device and the strong grid. Make sure there's a reliable grounding system, with grounding resistance below 4Ω (below 10Ω for high soil resistivity regions). The cross-sectional area of the earthing conductor should be no less than 25mm².

Separated layout for the lightning rod and the standing pole

V1.6 1410